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REPORT OF COMMITTEE ON REVISION OF STANDARD SPECIFICATIONS FOR CAST IRON WATER PIPE AND SPECIAL CASTINGS

The Committee on Revision of Standard Specifications for Cast Iron Water Pipes and Special Castings begs to submit the following report:

Appointed in 1911, this committee has for several years coöperated with a similar committee of the New England Water Works Association.

In January, 1916, at a joint meeting, held in New York City, a Joint Committee of six members—three from the committees of each Association—was appointed to prepare a tentative draft of revised specifications, to be submitted to the manufacturers for their examination and criticism. The resulting draft was forwarded to the manufacturers on May 6, 1916, accompanied by the following letter:

*To the Manufacturers of Cast Iron Pipe:*

The enclosed specifications for Cast Iron Water Pipe and Fittings, prepared by a joint committee formed from the committees of the American and New England Water Works Associations, is a preliminary draft of proposed new Standard Specifications, and is sent you for your criticism and discussion.

It is the intention of the joint committee to hold a meeting in New York City within a few months, and to invite manufacturers to appear and present in person their discussion of the enclosed specifications, or if attendance is not possible, to submit such discussion in writing at this meeting, notice of the time of which will be given thirty days in advance of the date finally chosen.

For your information, a brief statement of the development of the specifications now sent you may be of interest. In June, 1911, the American Water Works Association appointed a committee to revise the existing Standard Specifications for Cast Iron Pipe, and in March, 1912, the New England Water Works Association appointed a committee for a similar purpose. Both committees at once appreciated the fact that the first object in the work should be the development of a single specification, acceptable to both associations, and which, it might be hoped, would later be adopted by all other societies and therefore become, in fact, a standard specification.

While many independent meetings of the two committees have been held during the past three years, much of the time of each committee has been

spent in considering suggestions and questions submitted by the other, and January 21, 1916, a joint meeting of the committees was held in New York City, an entire day being devoted to the discussion of the modifications and revision of a tentative specification which the two committees had been considering for a number of months past. At this meeting, it was voted that a joint committee, of six members—three from the committee of each Association—prepare a tentative draft of specifications to be sent to manufacturers for their discussion and criticism, and the specification now forwarded to you is the result of the work of this joint committee.

In submitting this draft of specifications for your examination, it may further be well to state that the committee recognize that the proposed specifications will involve some increase in the cost of production, but it is believed that the resulting advantages to users will be sufficient to make the slight increase in cost of no practical moment. It is therefore hoped that the manufacturers will approach the consideration of these specifications on the assumption that there is a substantial demand for a uniform outside diameter, and good reasons for a specification of the chemical character of the metal, for the relation between flexure and breaking load, and for an improved coating.

It is to be understood, however, that the present draft is altogether tentative, that the minds of the committee are open, and that this draft is now sent you for your discussion and criticism, with the hope that finally a standard specification may be developed, acceptable throughout this continent, at least, to the users and to the manufacturers of the pipe, and which will become effective at such time in the future as will reasonably allow for any necessary changes in foundry equipment.

#### JOINT COMMITTEE.

JOHN H. GREGORY,  
N. F. S. RUSSELL,  
WALTER WOOD.  
Am. W. W. Assoc.

FRANK A. McINNES,  
FRANK A. BARBOUR,  
W. R. CONARD.  
N. E. W. W. Assoc.

*May 7, 1916.*

On November 23, 1916 an invitation was sent to the manufacturers to meet the Joint Committee in New York on December 14, 1916, of which the following is a copy:

DEAR SIRs: In May, 1916, a copy of a Tentative Draft of Standard Specifications for Cast Iron Pipe and Fittings, proposed by the Joint Committee of the American and New England Water Works Associations was sent you for your examination and criticism. In the accompanying letter it was stated that a meeting, to be held in New York City, would be called at some future date, which it was hoped you would attend and present to the committee your views regarding the proposed specifications.

We now beg to advise you that this meeting will be held in the House of the American Society of Civil Engineers, No. 220 West 57th Street, New York

City, at ten o'clock a.m. on Thursday, December 14, 1916, and we earnestly desire that you arrange to attend and be prepared to discuss the proposed specification.

The draft already sent you is altogether tentative and any amendments or suggestions you may care to make will be given due consideration.

Yours truly,

FRANK A. McINNES, *Chairman,*  
New England Water Works  
Assoc. *Committee.*

JOHN H.<sup>1</sup> GREGORY, *Chairman,*  
American Water Works Assoc.  
*Committee.*

*November 23, 1916.*

At the meeting held on December 14, 1916, which was presided over by Mr. Leonard Metcalf, President of the American Water Works Association, there were present, in addition to the presiding officer, the following:

Representatives of the New England Water Works Association:  
Frank Barbour, Wm. R. Conard, Thomas H. Wiggin.

Representatives of the American Water Works Association:  
John H. Gregory, Frank A. Barbour, W. H. Randall, N. F. S. Russell, Walter Wood.

Representatives of Manufacturers: N. F. S. Russell, U. S. C. I. Pipe and Foundry Company; Walter Wood, R. D. Wood & Co.; S. B. Brown, Warren Foundry Company; S. H. Morrison, Warren Foundry Company; R. W. Conrow, Central Foundry Company; R. R. Rust, Central Foundry Company.

The important changes from the present standard specifications proposed by the Tentative Draft of Revised Specifications, and which were the subject of discussion in the meeting of December 14, 1916, are as follows:

1. The adoption of a uniform outside diameter for all classes of pipe of the same size.
2. The specification of the permissible range of total carbon, combined carbon, silicon, manganese, phosphorus and sulphur in the metal.
3. The requirement of a relation between flexure and breaking load in test bars.

Other less important revisions included more complete specification for coating, the including of the element of time in the hydro-

static test requirements, the addition of flanged pipe and the substitution of the word "fittings" for special castings.

After a prolonged discussion of the proposal to adopt a uniform outside diameter and of the feasibility of specifying chemical quality of the metal—the stenographic report of which covers 128 typewritten pages—it became evident that the manufacturers, as represented at the meeting, were opposed to the revision of the present specifications, for various reasons, including the expense incident to changes in present equipment, increased manufacturing difficulties and the belief that the present specifications were good enough. In order that the statements of the manufacturers as to the effect of the proposed changes on cost of production and on the technique of manufacturing might be supported by definite figures and arguments, the following motion was unanimously carried:

Moved that the manufacturers be requested to consider the tentative specifications for cast iron pipe as prepared and submitted to the manufacturers under date of May 7, 1916, and report to the Committee at a meeting to be held on March 15, 1917, the result of their deliberations, with such modifications of the specifications, paragraph by paragraph, as may seem to them desirable, together with their reasons therefor.

It was the understanding of those present that the manufacturers would discuss in detail the tentative revised specifications, and would present in writing at the meeting to be held on March 15, 1917, the results of their deliberations.

When the date of this meeting approached, it was found that the manufacturers were not prepared to submit any detailed discussion of the tentative draft of specifications, and on March 31st the following letter was received by the Chairman of your committee:

JOHN H. GREGORY, *Chairman, Committee on Cast Iron Pipe Specifications, American Water Works Association, 170 Broadway, New York City.*

DEAR SIR: Referring to the request of the committee that the manufacturers should again study the tentative specifications submitted by the joint committee of the American Water Works and New England Water Works Associations, and if necessary to propose their own specifications:

We beg to state that this question has been fully discussed at three meetings of the Manufacturers, and it is the unanimous opinion that there are no essential changes, at the present, necessary in the specifications of the American Water Works Association, adopted May 12, 1908.

These specifications are not ideal, but, for practically ten years, have proven fairly satisfactory to both user and manufacturer, as evidenced by their almost universal adoption.

We would, therefore, respectfully suggest that the Specifications of the American Water Works Association, as now drafted, remain unchanged.

Yours very truly,

[SIGNED] WALTER WOOD  
N. F. S. RUSSELL.

The preceding letter makes evident the position of the manufacturers and the fact that not only will they not agree to any changes in the present specifications until forced to do so by the demand of consumers, but they will not coöperate with your committee to the extent of furnishing detailed reasons and figures in support of their objections to the proposed revision. Under these circumstances the only course open to your committee is to submit to the membership the tentative draft of revised specifications, and to request that after a reasonable time a ballot be taken to determine whether the Association is in favor of the adoption of the important changes suggested by these revised specifications:—viz., a uniform outside diameter, chemical requirements of the metal and a relation between flexure and breaking load.

To this end we recommend that the tentative draft of the revised specifications be printed and distributed to the members. The present draft of revised specifications is submitted to the Association for the purpose of ascertaining whether your committee is working along lines approved by the membership and there will doubtless be material modification in the present draft before final form is reached. It is not proposed that after final adoption the new specifications should go into effect for a number of years.

Presumably the New England Water Works Committee will follow the same course as suggested in this report, and will submit the revised specifications to that Association for its consideration.

It is obvious that in view of the manufacturers dictum that the present specifications are good enough, any further work on the part of your committee must be determined by the action of the Association. Presumably there was some reason for the appointment of this committee, and if in the judgment of the Association, there still remains sufficient reason for a revision of the specifications, doubtless the manufacturers will meet any reasonable requirements which may be demanded, but it is to be pointed out that all members should give serious consideration to the proposed revision, and should be prepared to follow up any vote in favor of revising the present specifications by a determination to use only the revised

specifications in their future work. It is believed that if, by coöperation with the New England Water Works Association and other similar bodies, a single standard specification can be developed, the result will be to the advantage of all concerned, including both the users and the manufacturers.

Respectfully submitted,  
JOHN H. GREGORY, *Chairman*,  
EDWARD E. WALL,  
W. H. RANDALL,  
F. A. BARBOUR.

*May 11, 1917.*